

RESPONSE

Serial Number: 10/733,780

Filing Date: December 11, 2003

Title: System and Method for Providing Event Hysteresis in Network Management Systems

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Claims 1-3, 5, 7-11, 13, 15-19, 21, 23-27, 29, 31-35, 37, 39, and 40 are pending. No amendments are being made at this time.

Claims 1-3, 5, 7-11, 13, 15-19, 21, 23-27, 29, 31 and 32 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent 6,006,016 (Faigon) in further view of U.S. Patent 6,513,129 (Tentij).

The Applicants traverse this rejection.

The Applicants' claims define methods and systems for managing "an event toggling between first and second event states." In more detail, each of the Applicants' independent claims recites, in part, reporting "said event" only after one of its states is maintained for a predetermined amount of time. In addition, various dependent claims (e.g., 5, 9, 21, 29, and 37) further recite reporting the number of times the event toggled between first and second states. In this sense, the claimed invention as defined in the independent claims defines a qualitative aspect (i.e., reporting the toggling event only after a state is maintained for a predetermined amount of time) of the toggling event, and the claimed invention as defined in the various dependent claims defines both a qualitative aspect (i.e., reporting the toggling event only after a state is maintained for a predetermined amount of time) and a quantitative aspect (i.e., reporting a number of times the event toggled between first and second states) of the toggling event. For purposes of understanding of the claimed invention, it is important to understand the non-trivial difference between qualitative and quantitative.

The qualitative aspect involves determining if an event maintains a state for a predetermined amount of time. This is relevant to the time *between* state changes, or said differently, the duration that a state persists without changing (toggling) to another state. This time-based parameter indicates the quality of the event (e.g., it is persistent and therefore a high

quality event worth reporting, or it is transient and therefore a low quality event not worth reporting). The quantitative aspect involves the number of times an event toggled (e.g., between a cleared state and an active state). This quantity-based parameter is relevant to the *number* of state changes, regardless of how long a given state persists. The claimed invention can therefore be used, for instance, to advantageously prevent processes of a given system (e.g., internal processes of NMS) from becoming overwhelmed with state changes of toggling events (alarms, etc), so that the performance of the system is not impacted and the user is not flooded with useless information concerning toggling events (e.g., Applicants' specification, page 5, lines 1-8).

In contrast, Faigon is only quantitative in nature, in that Faigon's system only counts the number of times a particular event occurs in a predetermined time. If the count threshold ("occurrence threshold") is achieved within the predetermined time ("time threshold"), then the fault is correlated and reported. This quantitative (event counting) focus is consistent throughout Faigon. See, for example: Abstract, Summary at col. 2, lines 56 to col. 3, line 3, and lines 50-58; Detailed Description at col. 7, lines 11-12, and col. 8, lines 13-15, and col. 11, lines 10-17, and col. 12, lines 33-36, and col. 13, lines 24-29 and lines 56-58, col. 14, lines 19-21, and col. 15, lines 24-26; and all 19 claims) At no time, however, does Faigon disclose or otherwise suggest determining or otherwise assessing the time that a given event state, after having toggled from a previous state, persists relative to a predetermined amount of time as variously recited in the Applicants' claims.

As correctly noted by the Examiner, Faigon fails to disclose or suggest *reporting* an event as having a given state only after that state is maintained for a predetermined amount of time. In addition, and as previously explained, the Applicants respectfully submit that Faigon also fails to disclose or otherwise suggest *determining* if an event maintains a given state for a predetermined amount of time. The Examiner refers to Faigon's "event threshold" as disclosing this determining step. However, and as previously explained, Faigon's event threshold is simply an integer value that specifies the number of alert signals (i.e., 'traps') received in a given period of

time. Simply stated, counting the number of alert signals during the so-called event threshold does not amount to determining if an event maintains a given state for a predetermined amount of time, as variously claimed by the Applicants.

The Examiner cites Tentij in effort to remedy deficiencies associated with Faigon. However, the Applicants respectfully submit that the combination of Faigon and Tentij is improper in that, when taken as a whole, there is no motivation or suggestion to combine these references to achieve the Applicants' claimed invention. Section 2143.01 of the MPEP states: "The mere fact that references can be combined or modified is not sufficient to establish prima facie obviousness." Rather, there must be some objective reason to combine the teachings of the references to make the claimed invention. The Applicants cannot find such an objective reason, and the Examiner has provided no reason other than the belief that the combination "provides interoperability between different components, systems, and networks within the managed network, regardless of their particular configurations and protocols." However, the Applicants respectfully note that Faigon already discloses interoperability (e.g., col. 20, lines 43-46), and further note that interoperability is the function of industry standards, such as the Telecommunication Network Management (TMN) standard noted by Tentij. The interoperability stems from when various manufacturers each make their networking products conform to the relevant industry standards, so that one company's networking devices will operate correctly when used in conjunction with another company's networking devices. In this sense, interoperability is not a function of managing alarms; rather, interoperability is a function of industry standards that can be used in conjunction with event/alarm management. More importantly, Faigon's fault correlator already addresses suppression of "temporary or short-term" fault problems (col. 9, lines 15-24; see also col. 1, lines 51-55 which demonstrates Faigon's objective to address problems associated with "transient faults"). Thus, it is not clear to the Applicants why one skilled in the art would have been motivated to modify Faigon by Tentij, to achieve benefits already provided by Faigon (i.e., Faigon discloses interoperability as well as selective generation of fault reports and suppression of transient faults). Such a modification

therefore seems likely only after having had the benefit of the Applicants' disclosure, which would reflect inappropriate hindsight.

Moreover, to modify Faigon by Tentij would "require a substantial reconstruction and redesign" of Faigon's methodology which uses a time threshold in which the occurrences of the fault events must occur in order to correlate the fault (Abstract). Indeed, such a modification would involve a substantial change in the basic principle under which the Faigon fault correlator was designed to operate. In more detail, Faigon generates a fault report only upon determining that a number of occurrences of an event state within the time threshold is greater than or equal to the occurrence threshold. (e.g., col. 2, line 64 to col. 3, line 3). This point is further demonstrated in Faigon's figures, and the various flows disclosed or otherwise suggested by Faigon equally rely on state changes to commence a quantity-based event reporting procedure. In any such cases, the duration of a toggled event state is not monitored or otherwise determined for purposes of event reporting. Rather, Faigon's fault correlator (e.g., state engine 420) uses a complex "aging scheme" to gradually clear certain state conditions (col. 8, lines 66-67). This aging scheme uses an "aging interval field" for indicating (in seconds) whether the effect of an update should be undone (e.g., col. 9, lines 46-47; col. 17, lines 24-26). In this sense, the Applicants respectfully submit that Faigon, as evidenced by the various figures and description discussed herein, was not designed to operate under conditions where the duration of an event state is assessed, and reporting is restricted based on that assessment. Thus, modifying Faigon's system to do so would appear to be improper under MPEP § 2143.01, which states that "the proposed modification cannot change the principle of operation of a reference." The underlying principle of operation of Faigon is event counting in the context of a distributed fault correlator (e.g., col. 2, lines 40-42; figures 3 and 4).

Furthermore, the Applicants respectfully submit that it is at best unclear as to how the features of Tentij would be integrated into the system of Faigon to provide the claimed invention as a whole, and even more unclear as to why one skilled in the art would be motivated to do so, particularly given Faigon's teaching away from duration-based fault correlation techniques (by

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disclosing quantity based fault correlation and suppression techniques that employ an aging scheme), as well as the lack of direction as to how such features would be integrated into the Faigon's system.

For at least these reasons, the Applicants respectfully submit that neither Faigon or Tentij, nor their combination, discloses or suggests each and every limitation as recited in the Applicants' claims, and therefore respectfully request the Examiner's reconsideration and withdrawal of this rejection.

Claims 33-35, 37, 39, and 40 were rejected under 35 U.S.C. §103(a) as being unpatentable over Faigon in further view of Tentij in further view of U.S. Patent 6,414,595 (Scrandis).

The Applicants traverse this rejection.

Without conceding as to the properness of the combination of Faigon, Tentij, and Scrandis, the Applicants note that Scrandis suffers the same deficiency as Faigon, in that Scrandis discloses a quantitative technique that counts alarms. The Applicants can find no occurrence where Scrandis discloses or otherwise suggests determining or otherwise assessing the time that a given toggled event state persists relative to a predetermined amount of time as variously recited in any of the Applicants' claims. Nor does Scrandis remedy other deficiencies discussed herein (e.g., lack of motivation to modify Faigon to include alarm duration based correlation, and teaching away from same).

Because neither Faigon, Tentij, Scrandis, nor their combination discloses or suggests each and every limitation as recited in the Applicants' claims, their combination cannot render the claimed invention obvious under 35 U.S.C. §103(a). As such, the Applicants respectfully request the Examiner's reconsideration and withdrawal of this rejection.

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Favorable action is solicited. The Examiner is kindly invited to telephone Applicants' attorney (603-668-6560) to facilitate prosecution of this application.

RESPECTFULLY SUBMITTED,

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By: / Neil F. Maloney /
Neil F. Maloney
Reg. No. 42,833
Attorney for Applicants
Grossman, Tucker, Perreault & Pfleger, PLLC
55 South Commercial Street
Manchester, NH 03101
Phone: (603)668-6560; Fax: (603)668-2970